R E P O R T R E S U M E S

ED 016 468 JC 670 948

SANITARY ENGINEERING TECHNOLOGY TRAINING, REPORT ON A PROGRAM DEVELOPED AT THE FAYETTEVILLE TECHNICAL INSTITUTE IN NORTH CAROLINA TO MEET A NATIONAL NEED.

BY- BOUDREAU, HOWARD E. PURCELL, CHARLES A.
AMERICAN VOCATIONAL ASSN., WASHINGTON, D.C.

PUB DATE SEP 64

EDRS PRICE MF-$0.25 HC-$0.20 3P.

DESCRIPTORS- *JUNIOR COLLEGES, *VOCATIONAL EDUCATION, *TECHNICAL EDUCATION, PUBLIC HEALTH, *SUBPROFESSIONALS, *ENGINEERING TECHNICIANS, SANITATION, TECHNICAL OCCUPATIONS, SCIENCE CAREERS,

THE FAYETTEVILLE TECHNICAL INSTITUTE IN NORTH CAROLINA ESTABLISHED ITS PROGRAM IN SANITARY ENGINEERING TECHNOLOGY IN 1964, WITH ITS FIRST GRADUATING CLASS PLANNED FOR SPRING 1966. IN COOPERATION WITH THE CURRICULUM LABORATORY AND THE STATE DEPARTMENT OF COMMUNITY COLLEGES, AN ADVISORY COMMITTEE WAS FORMED, MADE UP OF SPECIALISTS IN MANY AREAS OF SANITATION AND WATER POLLUTION. THE COMMITTEE HELPED TO DETERMINE (1) THE NEED FOR SUCH GRADUATES, (2) THE BEST COURSES FOR THE CURRICULUM, AND (3) THE NECESSARY FACILITIES. THE STUDENT LEARNS STANDARD LABORATORY AND TESTING PROCEDURES FOR WASTE, FOOD, AND WATER HANDLING IN MANY AREAS OF SANITARY ENGINEERING AND PUBLIC HEALTH. HE ALSO RECEIVES RELATED COURSES IN MATHEMATICS, SCIENCE, DRAFTING, AND SURVEYING AND SPECIALIZED COURSES IN WATER AND WASTE TREATMENT, SANITATION CONTROL SYSTEMS, AND PLANT MAINTENANCE. GRADUATES ARE AWARDED AN ASSOCIATE DEGREE OF APPLIED SCIENCE IN SANITARY ENGINEERING TECHNOLOGY. THE EMPLOYMENT OPPORTUNITIES INCLUDE PUBLIC HEALTH OR SANITATION ENGINEERING AIDES, TREATMENT PLANT AND WATER PLANT OPERATORS, STEAM SANITATION TECHNICIAN, INDUSTRIAL WASTE TECHNICIAN, TECHNICAL EQUIPMENT AND CHEMICAL SALES OR SERVICE PERSONNEL, AND ENGINEERING TECHNICIANS IN GOVERNMENT AGENCIES. THIS ARTICLE IS PUBLISHED IN "AMERICAN VOCATIONAL JOURNAL," VOLUME 39, NUMBER 6, SEPTEMBER 1964. (HH)

ED016468

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

SANITARY ENGINEERING TECHNOLOGY TRAINING

Report on program developed at the Fayetteville Technical Institute in North Carolina to meet a national need

HOWARD E. BOUDREAU,
President, and
CHARLES A. PURCELL,
Head, Engineering Department

THE GREATEST NEED of a modern city and community is an adequate, potable water supply. The next most important need is the proper disposal of the used water and solid waste. A modern city or community can exist without many of its municipal services, but healthy existence without good water and without adequate ways of removal of human excreta and industrial waste would be impossible.

It is an unfortunate fact that portions of many cities and communities in this country are still not provided with adequate sewage facilities. Our ever-increasing population and industrial expansion carries with it the demand of many services. One of the most vital of these services is the protection and safeguarding of our water supply. The production and protection of our water supply presents an economic investment in which the State of North Carolina alone is spending millions of dollars each year for the construction and reconstruction of water and waste treatment facilities.

Modern industries use tremendous amounts of water daily in industrial processes, and are spending thousands of dollars each year in research on treatment of liquid waste before it is returned to the streams and rivers. These activities require increasing numbers of highly skilled technical personnel to perform the many specialized tasks involved.

During the past few years, we have heard much discussion regarding the pollution of our streams by industrial wastes and household detergents. With the ever-increasing amount of vacations and leisure time being created for our working people, the outdoor living activities have mushroomed tremendously. A greater

JC670948

ppreciation and wider use of this nation's assets in its mountains, forests, streams and lakes has brought about a tremendous need for men who are trained in the area of sanitation and conservation.

With this in mind, the Fayetteville Technical Institute decided to do some research into the feasibility of training people in this area of work. In cooperation with the Curriculum Laboratory under the auspices of the State of North Carolina, Department of Community Colleges, a statewide advisory committee was formed. The committee was made up of specialists in many areas of sanitation and water pollution throughout the state.

The main functions of the State Advisory Committee were: (a) to determine the need for this type of employee in the field of Sanitary Engineering; (b) to help determine what courses should be placed in the curriculum, and (c) to determine the facilities which should be included in the laboratory.

Curriculum Approved

At the first meeting of the State Advisory Committee, a rough draft was presented to them. During the day-long meeting, much discussion was carried on by all members. Some additions were added to the curriculum and some material was deleted. A second meeting of the State Advisory Committee was called a month later to recommend final approval of the Sanitary Engineering Technology curriculum.

The entire curriculum was drawn up in such a manner that we could work it around our core program and adapt it to our local situation. The curriculum was approved by the State Advisory Committee, and was then sent to the North Carolina Department of Community Colleges for their approval. On June 1, 1964, the first Sanitary Engineering Technology program was born. This is the only type of program of this nature in North Carolina. The new Sanitary Engineering Technology program will be put into operation in the fall of 1964.*

The idea of incorporating a program in Sanitary Engineering Technology at Fayetteville Technical Institute seemed to fit ideally into our total picture at this time. We will be expanding our present facilities late this summer; and in our new expansion, we have made provisions for a laboratory especially designed to do the work that industry and governmental agencies are demanding of this new technician.

To gather specific information regarding the laboratory setup and equipment needed in this type of laboratory, a trip was made to the Robert A. Taft Sanitary Engineering Center of the U. S. Public Health Service in Cincinnati, Ohio. The people at this center were very cooperative in assisting us with our problems. They expressed a keen interest in this type of program, and expressed a great need for this type of person.

The graduates of this two-year curriculum will be awarded an associate degree of applied science in the field of Sanitary Engineering Technology. A graduate of this curriculum will have a knowledge of laboratory procedures and skill in performing all standard types of tests on liquid and solid forms of waste, milk and food, and water to determine bacteriological characteristics, acidity, etc.

The curriculum is designed to train technicians to work in the area of sanitary enigineering and public health. The student will receive related courses in mathematics, science, drafting, and surveying in addition to specialized technical courses such as water and waste treatment, sanitation control system, and plant and equipment maintenance.

Job Outlook Is Good

How important is this new program going to be to the graduates? One of the agencies of the federal government has expressed a desire for all of our graduates. This is indicative of the importance of this program due to the fact that we will not be graduating a class in this curriculum until the spring of 1966.

What employment opportunities await the technician in the field of sanitary engineering? The graduate of the curriculum will be qualified for entry into a variety of positions such as public health engineering aide, sanitation engineering aide, treatment plant operators, stream sanitation technician, industrial waste technician, technical sales and services of equipment and chemistry, water plant operators, and engineering technician positions with federal, state and local governments and municipalities.

Training facilities at Fayetteville

Entrance requirements in this course in Sanitary Engineering Technology are: a high school graduate or equivalent; two years of math including two of the following: algebra I, algebra II, geometry, trigonometry, and preferably a year of chemistry; and a qualifying score on the G.A.T.B. test given by the North Carolina Employment Security Commission.

In addition to the G.A.T.B. test, all students making applications for admission into our school are counseled by our guidance department. Every effort is made to help the students select the curriculum best suited for him or her so that they may profit to the fullest extent by the course of study which they have chosen.

With the inauguration of this new program in Sanitary Engineering Technology, we feel that we will be preparing people for an occupation where an acute shortage of trained manpower has developed. The health of our people and our country is a matter in which we cannot afford to have a shortage of skilled manpower.

*Copy of a Suggested Curriculum by Quarters for a Sanitary Engineering Technology program may be obtained by writing American Vocational Journal.

Official publication
of the
American Vocational Association,
Washington, D.C.

VOL. 39 / NO. 6 / SEPTEMBER 1964

AMERICAN VOCATIONAL JOURNAL

M. D. Mobley, Editor-in-Chief / Harry H. Cutler, Managing Editor
Barbara Wallace, Assistant Editor / Lowell A. Burkett, Advisor

NATIONAL ADVERTISING SALES
Katja Damania, Advertising Manager
1510 H St., N.W., Washington, D.C.

AVA EDITORIAL BOARD
Agriculture: R. W. MONTGOMERY
Auburn University, Alabama
Business: MARGARET E. ANDREWS
Minneapolis Board of Education
Distributive: HARLAND E. SAMSON
University of Wisconsin, Madison
Home Economics: HELEN HOPPER
Virginia State Education Department
Industrial Arts: RALPH BOHN
San Jose State College, Calif.
Trade & Industrial: RUSSELL K. BRITTON
Denver Board of Education
Consultant Representing Guidance
NIELS C. WODDER, Omaha, Neb.

AVA BOARD OF DIRECTORS
Officers
President: BYRL R. SHOEMAKER
Columbus, Ohio
Past President: JOHN A. JARVIS
Menomonie, Wis.
Executive Secretary: M. D. MOBLEY
Washington, D. C.

Vice Presidents
Agriculture: FLOYD D. JOHNSON
York, S. C.
Distributive: K. OTTO LOGAN
Olympia, Wash.
Home Economics: LUCILE C. FEE
Denver, Colo.
Industrial Arts: G. HAROLD SILVIUS
Detroit, Mich.
Trade & Industrial: ROBERT M. REESE
Columbus, Ohio

Ex Officio Member
Representative of State Directors
of Vocational Education: JACK P. NIX,
Atlanta, Ga.

Treasurer: ELIZABETH HORTON
Washington, D. C.

IN THIS ISSUE

15 A LOOK AHEAD WITH AVA (Part I of a Journal special report)
Only the Strong Can Remain Free / Byrl R. Shoemaker
AVA Program of Work for 1964
Where the Strength of a Professional Organization Resides / Melvin L. Barlow
How Your American Vocational Association Is Organized

26 Developing Industrial Teacher Education Programs / Robert M. Worthington and Ronald

28 States Implement National Program of Work for Home Economics / Marie Davis Hall

31 Expanding the Role of Vocational Agriculture / Julian Campbell

33 Sanitary Engineering Technology Training / Howard E. Dembroon and Charles A. Purcell

34 Sponsor Development in Distributive Education / Chet Shaeffer

36 Machines That Increase Efficiency in Business Education / Lura Lynn Straub

41 Liability Insurance Protection for AVA Members

42 AVA Commitee Memberships Announced for 1964-65

DEPARTMENTS

6 Latest Word from Washington
8 Short Notes
12 Vocational News Briefs
21 From the Public Information Committee
36 News Roundup
46 Book Previews

COVER

As this issue was being put to be
move of AVA from the old build
its new home was accomplished
only possible to picture the ext
of your Association's own build
In this issue. However, a photo
showing the new offices and AV
members at work will be publis
in an early issue—probably Nov

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Lowell Burkett for American Vocational Association, Inc. TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

The American Vocational Journal is published monthly, September through May, by the American Vocational Association, Inc., 1510 H St., N.W., Washington, D. C. 20005. All members of the Association receive the Journal. Nonmember subscriptions at $3.00 per year domestic, $6.00 per year foreign. Bulk subscription rates on request. Affiliated memberships are received through state vocational association secretaries. Second class postage paid at Washington, D. C.
Contents of the Journal copyright by the American Vocational Association, Inc., 1964.